

Application No. 10/040,134

Page -1-

## AMENDMENTS TO THE CLAIMS

## IN THE CLAIMS

1. (currently amended) A composition of hydrocarbon fuel, in the low vapor pressure range to very low vapor pressure range, and carbon dioxide ~~(CO<sub>2</sub>)~~ (CO<sub>2</sub>) wherein the concentration of ~~(CO<sub>2</sub>)~~ (CO<sub>2</sub>) within the fuel is sufficient in volume to achieve a substantial reduction in exhaust soot particulate when the fuel is consumed by engine combustion.

2. (Cancelled)

3. (currently amended) The composition of claim 1 ~~and 2~~ wherein said ~~CO<sub>2</sub>~~ CO<sub>2</sub> is mixed under normal temperature and pressure within said fuel and the ~~CO<sub>2</sub>~~ CO<sub>2</sub> does not react chemically with the fuel.

4. (currently amended) The composition of claim 1 ~~and 2~~ wherein the combination of said fuel and said ~~CO<sub>2</sub>~~ CO<sub>2</sub> is employed to improve fuel economy.

5. (currently amended) The composition of claim 4 wherein the combination of said fuel and said ~~CO<sub>2</sub>~~ CO<sub>2</sub> is employed to provide a net reduction in ~~CO<sub>2</sub>~~ CO<sub>2</sub> production in engine exhaust.

6. (currently amended) The composition of claim 1 ~~and 2~~ wherein the combination of said fuel and said ~~CO<sub>2</sub>~~ CO<sub>2</sub> is employed to provide a net fuel cost savings.

7. (currently amended) The composition of claim 1 ~~and 2~~ wherein the combination

Application No. 10/040,134

Page -2-

of said fuel and said ~~CO2~~ CO2 is employed to reduce fuel viscosity without entering into a chemical reaction.

8. (currently amended) A composition of: liquid hydrocarbon fuel, in the low vapor pressure to very low vapor pressure range, and carbon dioxide ~~CO2~~ CO2 wherein the concentration of ~~CO2~~ CO2 within the fuel is less than 1 atmosphere of pressure and sufficient in volume to provide a substantial supply of inert gas for use in fuel tank ullage inerting purposes and the ~~CO2~~ CO2 does not react chemically with the fuel.

9. (currently amended) The composition of claim 8 wherein: hydrocarbon fuel is in the low vapor pressure to very low vapor pressure range, and uses a commercial grade of recycled carbon dioxide ~~CO2~~ CO2 wherein the concentration of ~~CO2~~ CO2 within the fuel is sufficient in volume to provide a substantial supply of inert gas for use in fuel tank ullage inerting purposes.

10. (currently amended) The composition of claim 8 wherein the combination of enhanced fuel by the added ~~CO2~~ CO2 provides an improved fuel fire safety factor when said enhanced fuel is transferred and stored.

11. (currently amended) The composition of claim 8 within fuel tanks wherein the combination of said fuel and said ~~CO2~~ CO2 acts as a self-inerting fuel.

12. (currently amended) The composition of claim 8 wherein the combination of said fuel with said ~~CO2~~ CO2 provides that said fuel acts as a 'weightless container' for transferring and storing substantial volumes of ~~CO2~~ CO2 without additional containment vessels.

13. (currently amended) The composition of claim 8 wherein the combination of said fuel containing said ~~CO2~~ CO2 wherein that concentration of ~~CO2~~ CO2 in the fuel may be extracted from the fuel by mechanical means.

Application No. 10/040,134

Page -3-

14. (currently amended) The composition of claim 8 wherein the combination of said fuel and said ~~CO2~~ CO<sub>2</sub> is transferable and storable in, existing closed fuel distribution systems and fuel delivery equipment such as those used at airports and other re-fueling terminals.

15. (currently amended) The composition of claim 8 wherein the combination of said fuel and said ~~CO2~~ CO<sub>2</sub> provides a new means for safely extending Jet-A fuel supplies by mixing in percentages of JP-4 or naphtha into ~~CO2~~ CO<sub>2</sub> enriched Jet-A.

16. (currently amended) The composition of claim 8 wherein the combination of said fuel receiving said ~~CO2~~ CO<sub>2</sub> provides substantial fuel de-oxygenation during the ~~CO2~~ CO<sub>2</sub> mixing process.